

Collaboard Sizing

SIZING RECOMMENDATIONS

# Sizing recommendations by numbers of users for a Kubernetes cluster

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **250 users** | **500 users** | **1000 users** | **2000 users** | **4000**  **users** | **6000**  **users** | **8000**  **users** | **250 users** | **500 users** | **1000 users** | **2000**  **users** | **4000**  **users** | **6000**  **users** | **8000**  **users** |
| **Server** |  | | | | | | |  | | | | | | |
| Orchestrator |  | | | | | | |  | | | | | | |
| Management Server 1 |  | | | | | | |  | | | | | | |
| Management Server 2 |  | | | | | | |  | | | | | | |
| Management Server 3 |  | | | | | | |  | | | | | | |
| Worker Node 1 | 2 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 16 | 16 | 32 |
| Worker Node 2 | 2 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 16 | 16 | 32 |
| Worker Node 3 |  |  | 4 | 4 | 8 | 8 | 8 |  |  | 8 | 8 | 16 | 16 | 32 |
| Worker Node 4 |  |  |  | 4 | 8 | 8 | 8 |  |  |  | 8 | 16 | 16 | 32 |
| Worker Node 5 |  |  |  |  |  | 8 | 8 |  |  |  |  |  | 16 | 32 |
| TURN Server | 1 | | | | | | | 4 | | | | | | |
| SQL Server (\*) | 1 | 1 | 2 | 2 | 4 | 6 | 10 | 8 | 8 | 8 | 10 | 20 | 30 | 40 |

Sizing recommendations for appliance

This chapter provides the minimum server specifications required for the optimal operation of Collaboard. These guidelines have been determined considering a system supporting a maximum of 200 total users, with a maximum concurrency of 25 users.

**CPU Requirements**

Minimum Specification: 4-core, 8-thread processor

The computational power of the server plays a critical role in ensuring the seamless operation of Collaboard. A minimum of a 4-core, 8-thread processor is recommended to maintain smooth processing of simultaneous tasks across the server. This multicore and multithreading configuration is crucial to support multiple users and operations concurrently without performance degradation.

**RAM Requirements**

Minimum Specification: 32 GB

A minimum of 32 GB of Random Access Memory (RAM) is recommended. High-capacity RAM facilitates rapid data access and continuous smooth operation of the system, even under peak usage conditions. This specification is set to ensure system responsiveness and efficiency, accommodating the requirements of all users.

**SQL Server**

Collaboard uses SQL Server Express for its database needs. Please note that SQL Server Express has a storage limitation of up to 10 GB for the database. You will need to consider this limitation when planning for data management and storage, especially if you anticipate significant data accumulation over time.

**Additional Notes**

These specifications cater to a system supporting up to 200 users, with 25 concurrent users. Should the usage increase beyond this capacity, we strongly recommend transitioning to a Kubernetes cluster. A Kubernetes setup enables horizontal scaling of the application, thereby efficiently managing increased loads and providing enhanced performance stability. This strategy will cater to the growing needs of your organization and ensure continuous optimal operation of Collaboard.

For further guidance or clarification regarding these server specifications, please consult our DevOps team.

**Notes**

(\*) : SQL Server:Storage type local SSD. I/O latency 1-2 ms writes, 1-2 ms read. Max Data IOPS 32.000

Shared File Storage :

File Share

Random Read/Write IOPS: 26.8k/20.1k.

Sequential Read/Write: 1227MiB/s / 1416MiB/s

Mixed Random Read/Write IOPS: 19.6k/6531

NFS will become a bottleneck with more than users, so it is recommended to have clustered shared file systems like ClusterFS or Ceph.

**Disclaimer**

The recommendations reported in this document are based on the evaluation of the Collaborad production environment. Any other specific environment may differ from what is written in this document. We do not assume any responsibility in case of a different application usage that might lead to different sizing requirements.